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2006

OWL Usability Report: Appendices

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OWL Usability Report: Appendices

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Special Thanks

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Appendix I

Testing Materials

Demographic Questions

Please respond to the following questions by placing a check mark in the appropriate box. Fill in any information you are willing to share on the lines provided.

1. I am ____ years old.
2. I am: ☐ male / ☐ female.
3. Currently I am a _____.
 - ☐ Freshman
 - ☐ Sophomore
 - ☐ Junior
 - ☐ Senior
 - ☐ Graduate Student
 - ☐ Staff or Faculty Member
 - ☐ Other/None of the above

Explain _____
4. If you are a student: What is your major? Staff or faculty: What department do you work for?
No Purdue affiliation: Where do you work?

5. I am: ☐ left / ☐ right handed.
6. I am color blind.
☐ Yes / ☐ No / ☐ I don't know
7. Each week I spend approximately ____ hours using a computer.
 - ☐ 0-5
 - ☐ 6-10
 - ☐ 10-15
 - ☐ 16-20
 - ☐ 20+
8. Have you ever used the Purdue OWL?
☐ Yes / ☐ No / ☐ I don't know
9. How frequently do you use the Purdue OWL?
 - ☐ Once a day
 - ☐ Once a week
 - ☐ Once a month
 - ☐ Once a year
 - ☐ Never / Not to my knowledge

10. If you have visited the Purdue OWL, who suggested it to you?
 - ☐ A teacher suggested it to me
 - ☐ Another student suggested it to me
 - ☐ A colleague or friend recommended it
 - ☐ I heard about it at a conference
 - ☐ I do not remember
 - ☐ I do not use the OWL
 - ☐ I found it myself

How did you find it?

☐ Other _____
11. Did you use the "old" OWL site (prior to August 2005)?
☐ Yes / ☐ No / ☐ I don't know
12. Have you used the new version of the Purdue OWL, launched August 2005?
☐ Yes / ☐ No / ☐ I don't know
13. Have you taken First Year Composition at Purdue? (101, 102, 103, 106, 108)
☐ Yes / ☐ No / ☐ I don't know
14. Have you taken First Year Composition classes elsewhere?
☐ Yes / ☐ No / ☐ I don't know

Where? _____
15. How often do you use the computer to find writing-related information?
 - ☐ Once a day
 - ☐ Once a week
 - ☐ Once a month
 - ☐ Once a year
 - ☐ Never / Not to my knowledge
16. Is English your first language?
☐ Yes / ☐ No / ☐ I don't know
17. Would you say you write English fluently?
☐ Yes / ☐ No / ☐ I don't know

Purdue Online Writing Lab (OWL) Usability Report
Salvo, Brizee, Driscoll, Sousa

I am comfortable operating a computer.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I am comfortable navigating the Internet.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I often turn to the web to find information.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I frequently use the web for communication (email, instant messaging, chat, blog).	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I am comfortable building and maintaining websites.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I spend a lot of time using a computer each day.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I consider myself an expert computer user.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I am confident in my writing ability.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I am familiar with concepts in the study of writing.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I often wish there were a resource I could turn to that would answer my writing questions.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I (or someone I know) would benefit from online writing help.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
When faced with a writing question, I am likely to consult a book.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
When faced with a writing question, I am likely to consult a website.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
When faced with a writing question, I am likely to ask another person.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I enjoy talking about my writing.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Talking about my writing embarrasses me.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I prefer to find information online rather than in a book.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I prefer to talk to a real person rather than look for answers online myself.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
When I cannot find an answer immediately, I often give up the search.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

If you are an OWL user, please explain how or why you have used the Purdue OWL:

Screening Questionnaire

Usability Materials ENGL 515 Spring 2006
Salvo

Screening questionnaire:

Are you a matriculated student currently registered for classes at Purdue University?

Yes / No (Circle one)

Are you involved in the Professional Writing program of the Department of English?

Yes / No (Circle one)

Are you currently a member of ENGL 515: Advanced Professional Writing, taught by Prof. Salvo, Spring 2006?

Yes / No (Circle one)

Have you answered "yes" to each of these questions?

Yes / No (Circle one)

If you have answered "yes" to each of these questions, please add the following code to the top right-hand corner of all of your materials:

OWL Usability Test: Test 1: Paper Prototyping

Paper prototype test: Splash screen design

Purpose: The purpose of this test is to determine users' preference for a number of different design elements. Collect as much information as possible regarding users' preferences for each design. Users should be speaking their preferences and articulating their decisions aloud so that their reactions can be collected.

Procedure: Twelve different prototypes are included with this test and should be numbered one through twelve. As the principle test administrator (and key or non-key personnel) your task is to elicit as much information from the test subjects as possible. Prompt the user to articulate as much information regarding each design, why they prefer it, and how they imagine using this design. Test observers should be collecting, in as much detail as possible, key phrases and words that the users mention in relation to the ease of use, usability, and positive aspects of each design. Pay special attention and record negative words having to do with appearance, ease of use, or potential problems of navigation. Record notes along with the number of the prototype (written in ink on the upper back of each prototype). *Your actions are indicated in italics.*

This test should take approximately 15 minutes.

Introduction: (Read this to users)

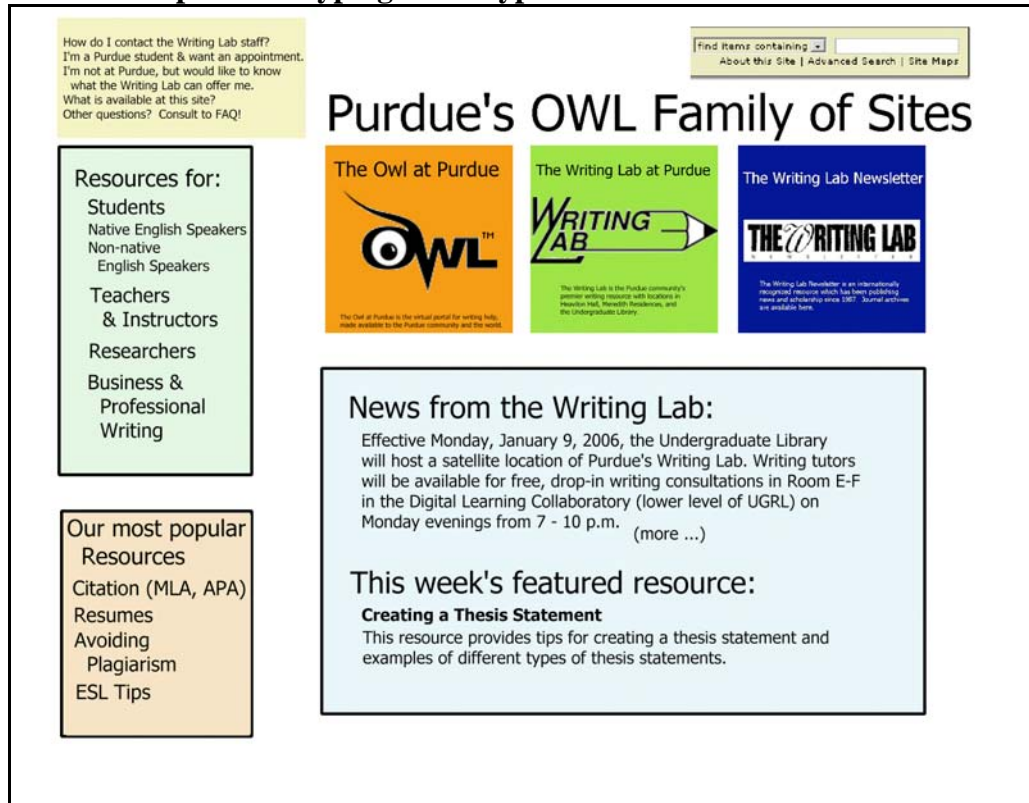
Thank you for agreeing to spend time with us today. Please remember that you can stop testing at any time for any reason. If you are uncomfortable or want a break for any reason, simply tell me and we will take a break. My name is (FIRST NAME) and I can answer any questions that may occur to you during testing. These two individuals are recording key words and phrases that you use to describe the site, as well as contextual information about the test. They won't be able to answer your questions, and in fact, they've been asked not to respond to any questions you may have during testing.

Okay, here we go.

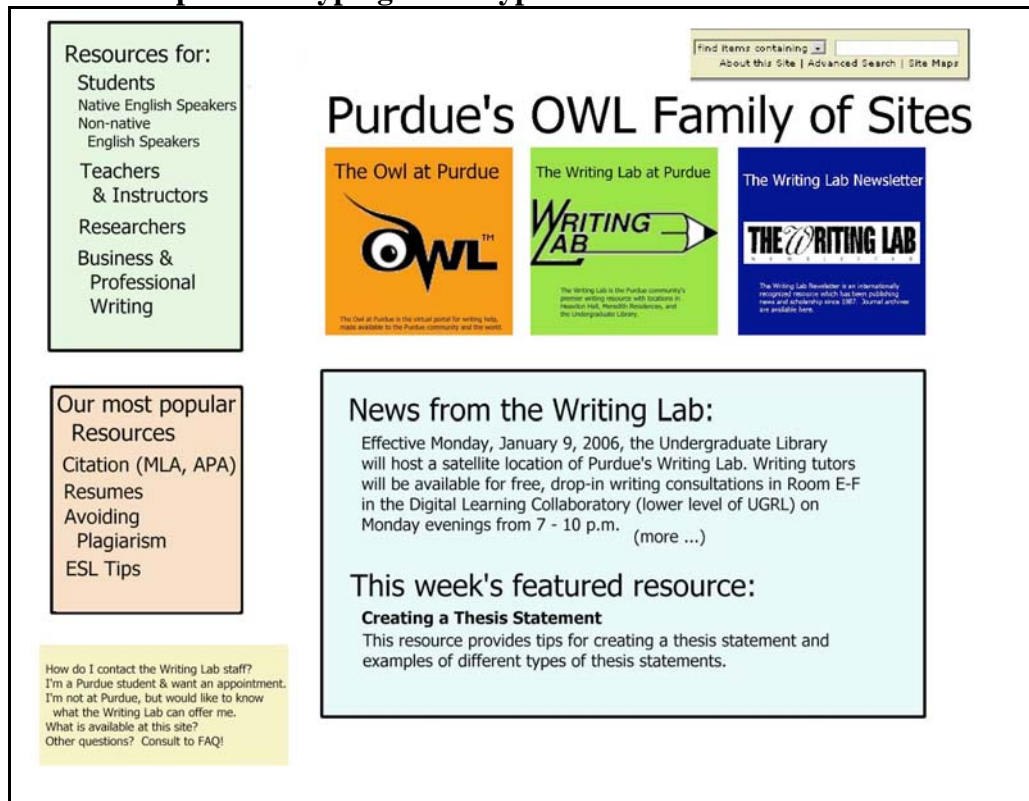
1. *Lay out prototypes 1, 4, 7, 10 face up in front of the user. Give the user at least one full minute to study the design, and resist the urge to offer any answers to questions. However, user questions may yield interesting information and recorders should write them down.*
2. Please describe how you react to this website (*point to #1*). Describe this website: Is it professional? Is it easy to navigate? Does it provide links to writing-related information?
3. Please describe how you react to this website (*point to #4*). Describe this website: Is it professional? Is it easy to navigate? Does it provide links to writing-related information?
4. Please describe how you react to this website (*point to #7*). Describe this website: Is it professional? Is it easy to navigate? Does it provide links to writing-related information?
5. Please describe how you react to this website (*point to #10*). Describe this website: Is it professional? Is it easy to navigate? Does it provide links to writing-related information?
6. Compare these four designs. If I asked you to choose one of the designs as the new OWL web design, which would it be? Why? Why haven't you chosen the others? *Give time for users to respond to each of the three rejected designs.*
7. Which design should be the new OWL web design? Why do you say that? How does this web site's design make you feel? What about the design makes it appropriate as the new OWL website design?
8. *Add any additional follow-up questions as appropriate.*
9. *Based on the user selection, place the new design prototypes out for the user to see:*
 - a. *For users selecting #1, keep #1 and add #2 and #3.*
 - b. *For users selecting #4, keep #4 and add #5 and #6.*
 - c. *For users selecting #7, keep #7 and add #8 and #9.*
 - d. *For users selecting #10, keep #10 and add #11 and #12.*

10. Please compare these designs. If I asked you to choose one of the designs as the new OWL web design, which would it be? *Give the user at least one full minute to study the designs, and resist the urge to offer any answers to questions. However, the questions may yield interesting information and recorders should write down user questions.*
11. Which design should be the new OWL web design? Why do you say that? How does this web site's design make you feel? What about the design makes it appropriate as the new OWL website design?
12. Are there any elements in any of these designs that you would like to remove? Anything that seems inappropriate for a website designed to help support writing instruction?
13. What would you like the site to provide that is not here?
14. *Add any additional follow-up questions as appropriate.*
15. *Lay out the remaining six prototypes that you have not yet shown to the user.*
16. Do you see anything here that would change your mind about the design you chose? *Give the user at least one full minute to study the design, and resist the urge to offer any answers to questions. However, the questions may yield interesting information and recorders should write down user questions.*
17. Are there any elements in these designs that you would like to see incorporated into the final design?
18. What is missing from this design that you would like to see in the final version of the OWL website redesign?
19. What are the key elements in designing an effective page for the OWL?
20. What information do you think the OWL makes available?
21. How can the OWL designers convey a sense of professionalism, of timely content, and of effective writing advice? How would a good design convey these things to you?

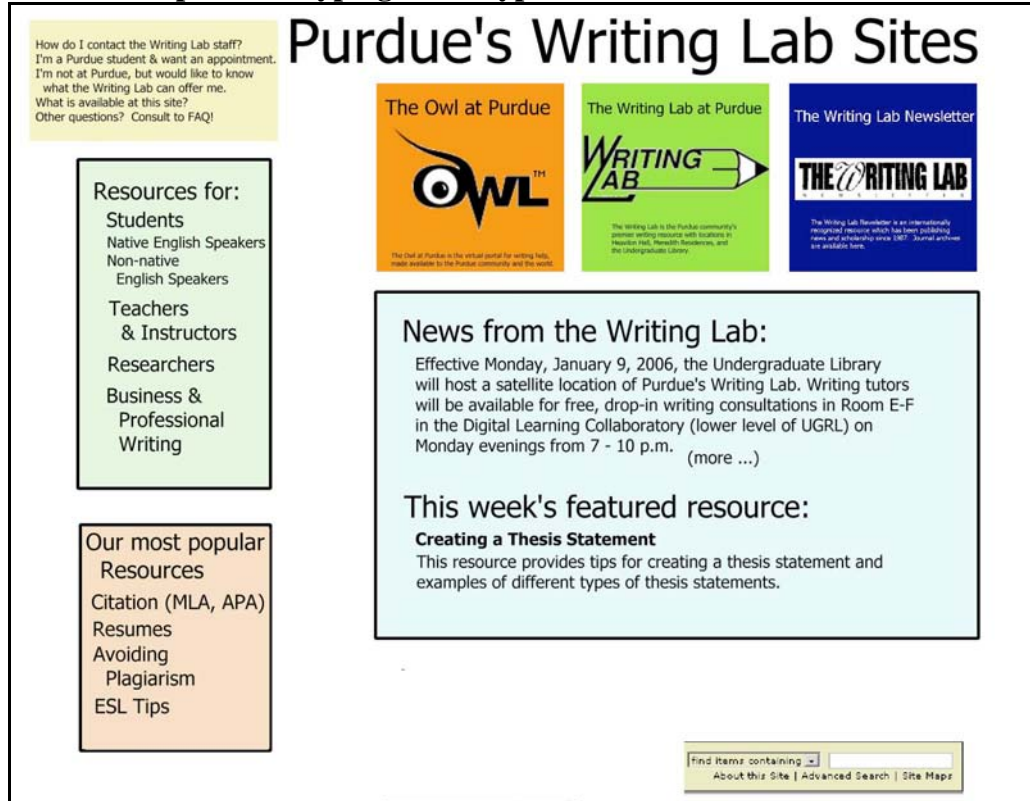
Task1a – Paper Prototyping: Prototype 1



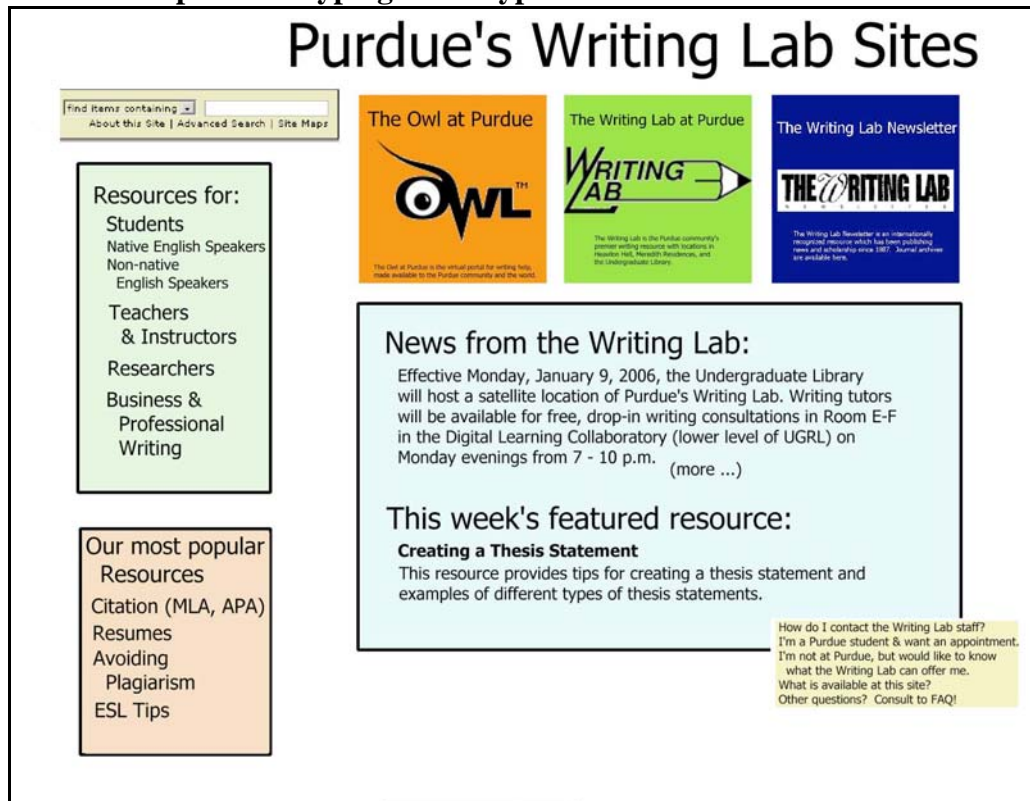
Task1a – Paper Prototyping: Prototype 2



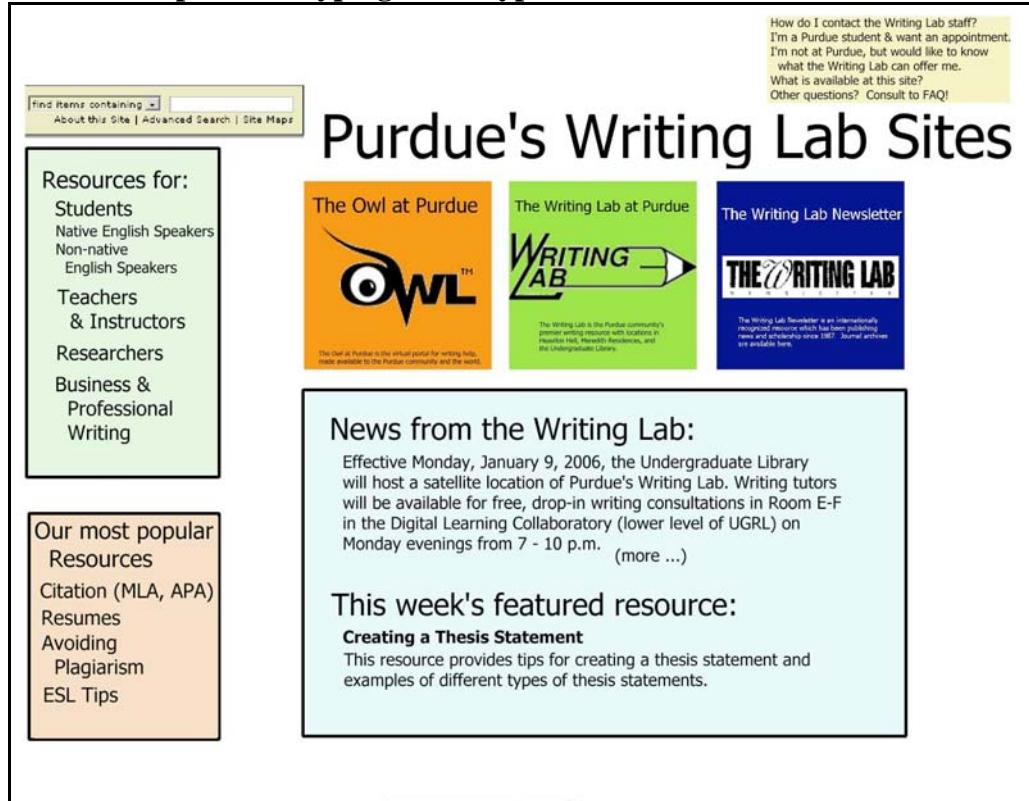
Task1a – Paper Prototyping: Prototype 3



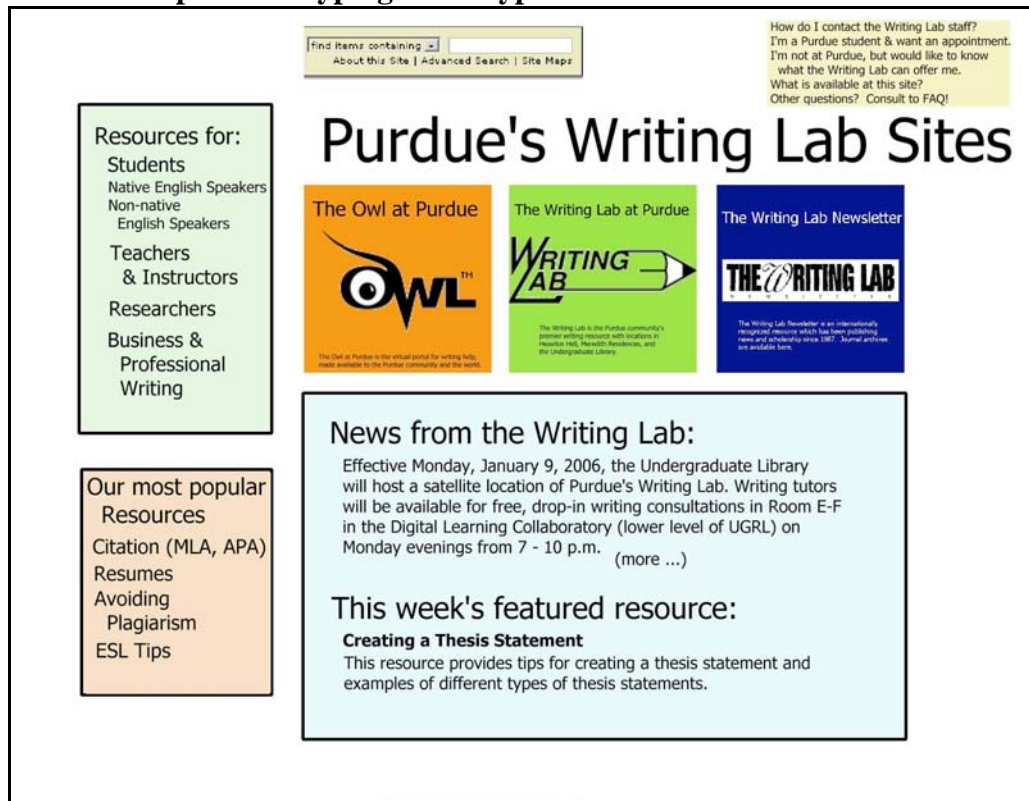
Task1a – Paper Prototyping: Prototype 4



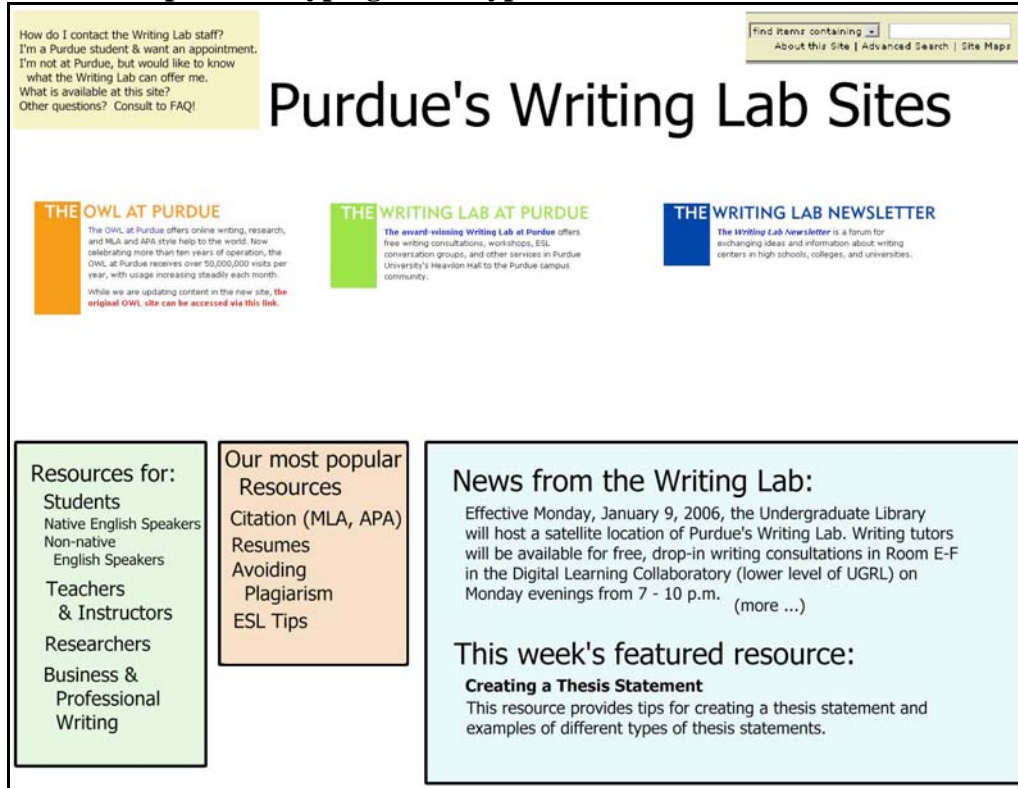
Task1a – Paper Prototyping: Prototype 5



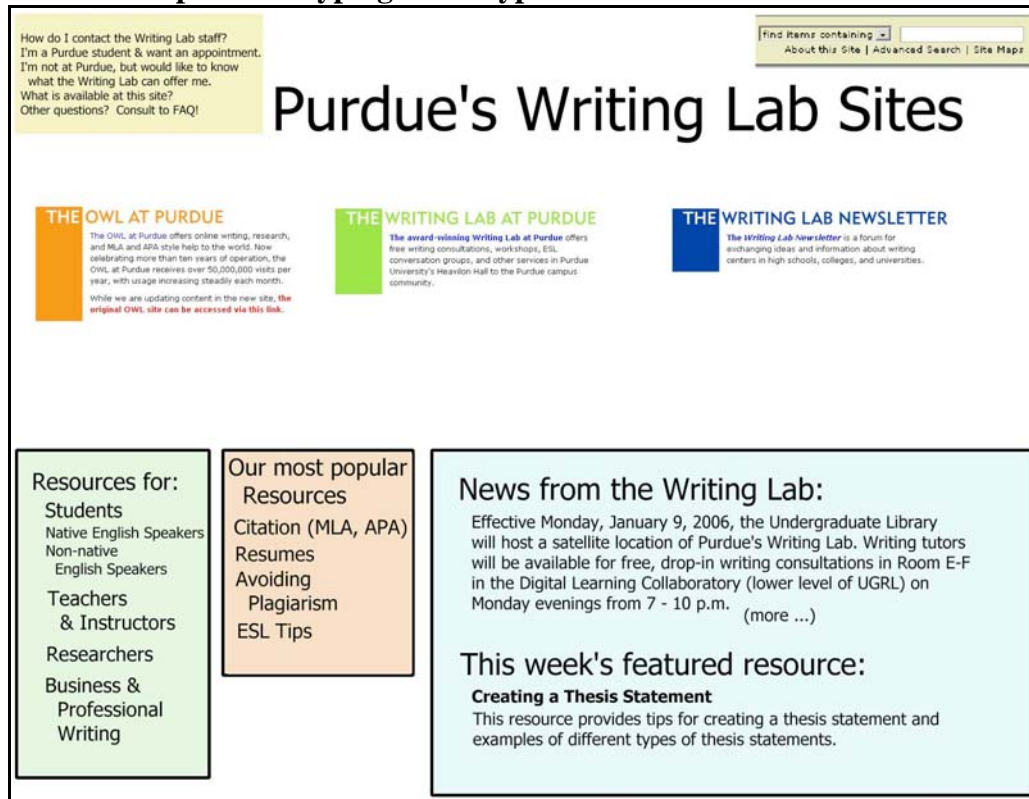
Task1a – Paper Prototyping: Prototype 6



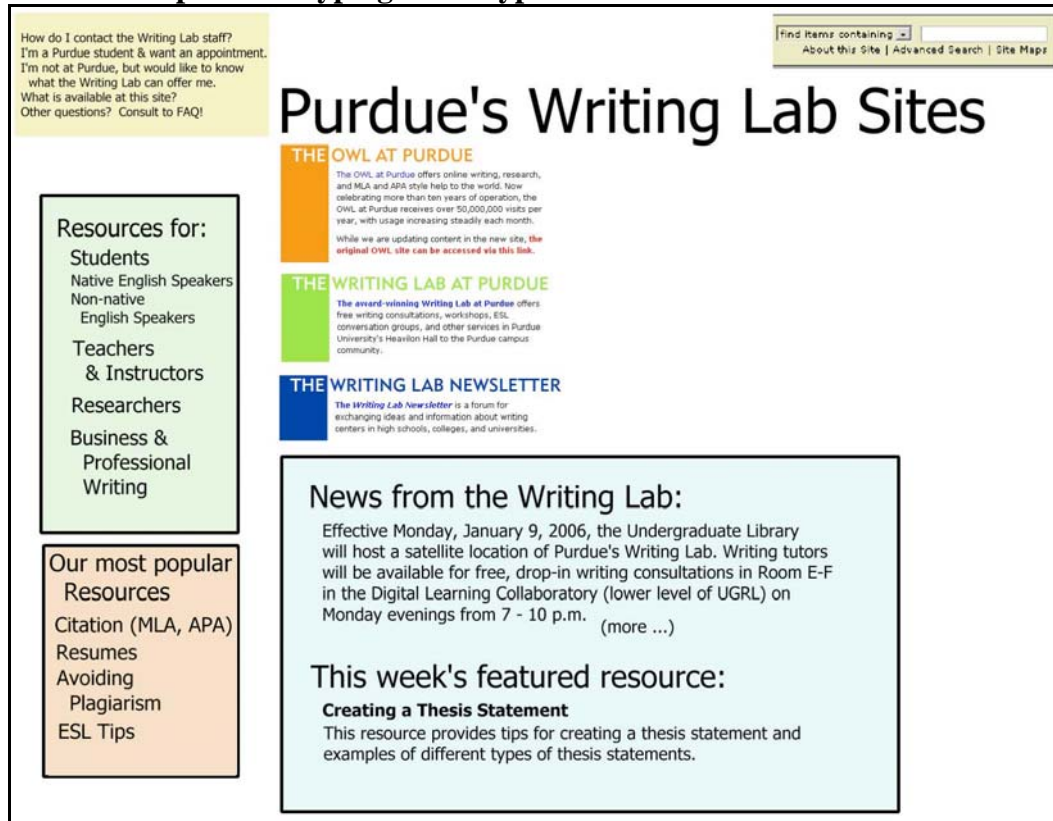
Task1a – Paper Prototyping: Prototype 7



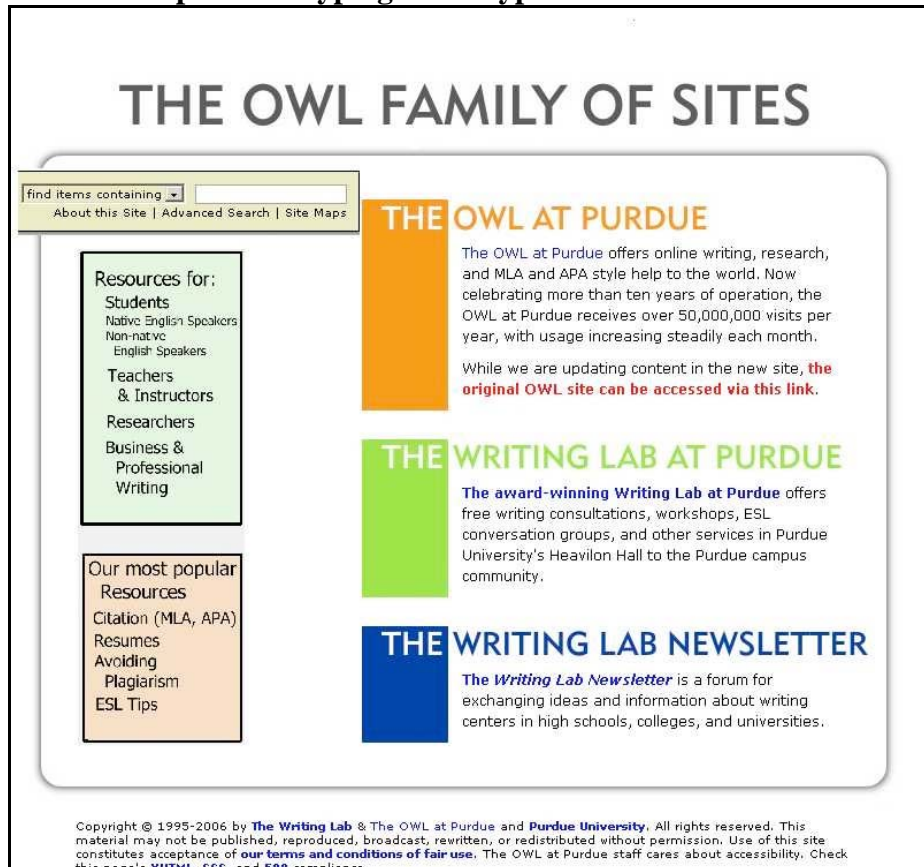
Task1a – Paper Prototyping: Prototype 8



Task1a – Paper Prototyping: Prototype 9



Task1a – Paper Prototyping: Prototype 10



OWL Usability Test: Test Two, Build Your Own

User-Constructed Design

Purpose: The purpose of this test is to determine how users would assemble the front/splash page of the OWL. Collect as much information as possible regarding users' preferences for each design.

Procedure: Paper-based pieces of the prototype design are included with this document. Ask the user to place the visual elements on either background, either the framed background provided or a plain sheet of paper. As the principle test administrator (and key or non-key personnel) your task is to elicit as much information from the test subjects as possible. Prompt the user to articulate as much information regarding each design decision, why they place it, and how they imagine using this design. Test observers should be collecting, in as much detail as possible, key phrases and words that the users mention in relation to the ease of use, usability, and positive aspects of each design. Pay special attention and record negative words having to do with appearance, ease of use, or potential problems. *Your actions are indicated in italics.*

This test should take approximately 15 minutes.

Introduction: (Read this to users)

Your participation and patience is appreciated. Please remember that you can stop testing at any time for any reason. If you are uncomfortable or want a break for any reason, simply tell me and we will take a break. I can answer any questions that may occur to you during testing. These two individuals are (This individual is) recording key words and phrases that you use to describe the site design, as well as contextual information about the test. (They) won't be able to answer your questions, and in fact, have been asked not to respond to any questions you may have during testing.

Okay, here we go.

- *Lay out the testing elements in front of the user. Give the user at least one full minute to study the pieces, and resist the urge to offer any answers to questions. However, the questions may yield interesting information and recorders should write down user questions.*
- Why do you think that belongs there?
- Is this the first thing you would look for on this page? The last? Why?
- How do you imagine using this design?
- Should this element be available to all users of the OWL site? Who would need access to this information or functionality?
- What do you expect to be able to do with *that, there?*

These questions are intended as inspirational prompts. Follow users as they place elements on the background, and remind recorders to collect as much information regarding the users' actions and utterances as possible. When the user is satisfied with the design, ask the user to articulate the process of design: what was important? What was unimportant? What do OWL designers need to keep in mind as they design a site?

OWL Usability Test: Test 3: Task-Oriented, Site-based testing

This protocol is a simple quantitative, task-based protocol combined with a short questionnaire about the experience.

Note: Make sure each computer has the “home” set to <http://owl.english.purdue.edu>. This way, the Proctor can ask participants to click on the “home” link to proceed to the next task.

Note #2: The proctor is permitted to repeat the task or clarify questions about the task itself but is not to assist the user or answer questions relating to the navigation of the site as a whole. (i.e. the proctor can help them understand the task but not complete it).

Note #3: I’ve also outlined this task based on the assumption that we will have two consultants at every station.

Consultant Activity: One consultant will be designated the time-taker – it is the job of this consultant to record the time it takes the user to find the specific item on the site. The second consultant will be in charge of recording the number of clicks that it takes the user to find the selected information. Timing should begin after the proctor reads the task. (If there is only one recorder, the test administrator and recorder should decide who is going to record mouse clicks.)

Materials needed (per test-taker): Stopwatch (for time taker); notepads x2 (for both time taker and click-recorder); writing utensils.

The Task Script:

Proctor: The computer in front of you is displaying the beginning page of the Purdue OWL family of sites. During this phase of the test, we would like you to use the site to find specific information, which will be given to you shortly. You are not going to be evaluated on your proficiency with navigating the Internet or using the computer, rather, this test is to see how well the site allows you to find particular information. That is, we are testing the *site* and not you.

TASK 1: Use the website to find information about how to evaluate print vs. Internet sources for research.

Question: According to the OWL website, how do internet sources differ from print-based sources?

Consultant: Please record time to completion and number of clicks.

Proctor: Please click on the home link to begin the next task.

TASK 2: Use the website to find cures to common causes of writer’s block. Locate the advice for dealing with stress. How many solutions are offered?

Answer: Four.

Consultant: Please record time to completion and number of clicks.

Proctor: Please click on the home link to begin the next task.

TASK 3: Please find the answer to this question using the OWL website: When would you have a 3 or more page resume?

Answers are based on applying for a senior-level management position with leadership experience or for applying for research or scientific position, particularly university faculty positions.

Consultant: Please record time to completion and number of clicks.

Proctor: Please click on the home link to begin the next task.

TASK 4: Imagine that you are writing a paper for a social science class using observation as a part of primary research.

Question: Can a researcher focus on everything happening at the observational site?

“Before you observe, you should consider how you will focus your observations--because you can't focus on everything!”

Consultant: Please record time to completion and number of clicks.

After-Test Questionnaire

To be administered directly after the last task is complete.

Directions: Please answer the following questions based on your experiences during the computer task.

Overall, finding specific information was:	Very Difficult	Difficult	Neutral	Easy	Very Easy
Organization of the home page was:	Very Ineffective	Ineffective	Neutral	Effective	Very Effective
Most of the information was:	Buried Deeply in Pages	Somewhat Buried	Neutral	Accessible	Very Accessible
The site organization was:	Very Ineffective	Ineffective	Neutral	Effective	Very Effective
The site navigation was:	Buried Deeply in Pages	Somewhat Buried	Neutral	Accessible	Very Accessible
When I was looking for information, I felt:	Very lost	Somewhat Lost	Neutral	I knew where I was	I knew exactly where I was
How did you feel when using the site:	Very Confused	Confused	Neutral	Comfortable	Very Comfortable

What features would have helped you find the information faster?

--

What other changes would you make to the site?

[illegible]

Self-reporting Usability Form

1. Note the current time in minutes and seconds: _____ (hours: minutes. seconds, i.e., 9:12.24)

- a. Open any browser.
- b. Go to the following web site: <http://owl.english.purdue.edu/>

Note the current time in minutes and seconds: _____

Which browser did you use to access the document? _____

This document refers to "The OWL Family of Sites." What do you understand this to mean?

2. Note the time in minutes and seconds: _____

- a. Follow the link titled [The OWL at Purdue.](#)
- b. Read the OWL Webmaster's Blog entry dated August 26.

Note the current time in minutes and seconds: _____

Please briefly answer the following three questions:

- o What is available at this website? _____
- o How many years has the OWL been online? _____
- o How does this website differ from the "original" OWL website? _____

Comments:

3. Note the current time in minutes and seconds: _____

- a. Please find the document titled [How to use Adjectives and Adverbs](#) under **Grammar and Mechanics** in the Navigation menu.
- b. Select this document.

4. Note the current time in minutes and seconds: _____

Please briefly answer the following questions:

- o Did the website react in a way you expected it to? **Yes / No** (Circle one)
- o Please explain your answer and describe your expectations. Note the current time in minutes and seconds: _____
- a. Remain on the page titled [How to use Adjectives and Adverbs.](#)
- b. Find out how you would print this document.
- c. Find out how you could obtain a copy of this document in PDF format.

5. Note the current time in minutes and seconds: _____

Please briefly answer the following questions:

- Were you able to find the instructions or link for printing? **Yes / No** (Circle one)
- Were you able to find the instructions for downloading a PDF document? **Yes / No** (Circle one)
- Are you familiar with PDF format? **Yes / No** (Circle one)

Do you have any suggestion for where printing or links should appear on this page?

6. Note the current time in minutes and seconds: _____

- a. Return to the main OWL website: <http://owl.english.purdue.edu/>
- b. Follow the link titled [The OWL at Purdue](#).
- c. Please find the document titled [Research Overview](#) under **Research and Citation**.
- d. Select [Research Overview](#).

7. Note the current time in minutes and seconds: _____

Please briefly answer the following questions:

- Were you able to find the document titled [Research Overview](#)? **Yes / No** (Circle one)

If you answered “No,” what would have helped you find this document? (If you found the document, how did you find it?) Briefly describe your impressions of the order and layout of the items listed under the heading **Research and Citation**.

8. Note the current time in minutes and seconds: _____

- a. Remain at [Research Overview](#) under **Research and Citation**.
- b. Please locate the resource’s sections.

9. Note the current time in minutes and seconds: _____

Please briefly answer the following questions:

- How many sections does this resource have? _____
- Were you expecting this information to appear here? Why or why not?

10. Note the current time in minutes and seconds: _____

- c. You should still be at **Research and Citation** > [Research Overview](#).
- d. Scroll down to the bottom of the page.
- e. Find the Legal Information.

11. Note the current time in minutes and seconds: _____

Please briefly describe your understanding of the legal information presented:

12. Note the current time in minutes and seconds: _____

- a. You should still be at [Research and Citation > Research Overview](#).
- b. Find Contact Information for the OWL, the OWL Webmaster, and Purdue Writing Lab staff.

13. Note the current time in minutes and seconds: _____

- o If you wanted to contact the OWL with a question about the website, who would you contact? Why?

- o If you wanted to know the Purdue Writing Lab's hours of operation, where would you find that information, and who would you contact?

- o Who would you contact to invite an OWL staff member to talk to your school about the Purdue OWL and writing lab?

14. Note the current time in minutes and seconds: _____

- a. Return to the main OWL website: <http://owl.english.purdue.edu/>
- b. Please locate the handout titled: [Transitional Devices \(Connecting Words\)](#)

15. Note the current time in minutes and seconds: _____

Please briefly answer the following questions:

- o Were you able to find the document titled [Transitional Devices](#)? **Yes / No** (Circle one)

16. If you answered "No," what would have helped you find this document? If you answer "Yes," how did you find it? Please add any comments.

Please add any comments, observations or questions you have about this website, the usability testing procedures we have just completed, or any other questions you may have about this process to the back of this form. You may contact Michael Salvo by email [salvo@purdue.edu] or telephone [765-494-4425] with any questions or concerns you may have. Please do not include any identifying information on these materials.

After-Test Questionnaire

To be administered directly after the last task is complete.

Directions: Please answer the following questions based on your experiences during the computer task.

Overall, finding specific information was:	Very Difficult	Difficult	Neutral	Easy	Very Easy
Organization of the home page was:	Very Ineffective	Ineffective	Neutral	Effective	Very Effective
Most of the information was:	Buried Deeply in Pages	Somewhat Buried	Neutral	Accessible	Very Accessible
The site organization was:	Very Ineffective	Ineffective	Neutral	Effective	Very Effective
The site navigation was:	Buried Deeply in Pages	Somewhat Buried	Neutral	Accessible	Very Accessible
When I was looking for information, I felt:	Very Lost	Somewhat Lost	Neutral	I knew where I was	I really knew where I was
How did you feel when using the site:	Very Confused	Confused	Neutral	Comfortable	Very Comfortable

What features would have helped you find the information faster?

--	--

What other changes would you make to the site?

--

Appendix II

Miscellaneous

Orientation Script

Usability Materials ENGL 515 Spring 2007
Salvo

Orientation Script

"Good afternoon. My name is Michael Salvo. You probably know me as the instructor of ENGL 515: Advanced Professional Writing or from other classes in the Professional Writing major here at Purdue. For the next hour or so, I am stepping out of my teaching role and will be conducting this usability test. The usability testing process should take a full hour, after which we will discuss the test as a class.

The usability test today has 6 steps, one of which (the screening questionnaire) you have already completed and the second of which (orientation) we are completing now. The usability testing steps consist of

1. screening questionnaire
2. orientation
3. consent agreement
4. demographic pre-test questionnaire
5. usability data collection
6. post-test and conclusion

If at any time you feel uncomfortable or feel stress of any kind (physical, psychological, or environmental), please let me know about it. You are free to refuse to answer any question for any reason, and may leave at any time during the testing for any reason without consequence to your grade in ENGL 515. Your participation is appreciated and you are free to ask questions at any time.

Please try to remember that we are testing a website for its design, functionality and usability and any problems you encounter will be helpful to our research. If you experience anything that you think may be significant, please do not hesitate to share your comment, concern or question with me.

Thank you for your time and attention and I will distribute consent agreement forms and the pre-test questionnaire at this time."

Participant Consent Form

Research Project Number 515 PILOT

STUDENT RESEARCH PARTICIPANT CONSENT FORM
ENGL 515: Advanced Professional Writing
Michael J. Salvo
Purdue University
English Department

Purpose of Research

The purpose of the research is to test the usability of the design of the new OWL website. Students are completing this pilot study in order to gain experience working with usability testing instruments and procedures in preparation for creating usability testing materials.

Specific Procedures to be Used

I will complete a background questionnaire, hear an orientation script, complete a self-reporting form, and participate in a post-test discussion. I will participate in a post-test discussion where I will answer questions about usability, specifically regarding the design of the OWL website, <http://owl.english.purdue.edu/>.

Duration of Participation

My participation in this study will last for one class period on January 12, 2007. When I evaluate the website, I will spend no more than 1.5 hours. I will spend no more than 1 hour in the post-test discussion.

Benefits to the Individual

I will be learning usability testing procedures and experience what it is like to be a usability test subject. I may contribute to a body of knowledge that supports innovation in professional writing instruction and practice.

Risks to the Individual

Risks for participating in the study are minimal and are no more than I would encounter in everyday life or in the course of my studies at Purdue University.

Compensation

I will not receive any compensation for participation in this study.

Confidentiality

Confidentiality cannot be guaranteed because of the nature of large groups. My responses can not be guaranteed to be anonymous because Michael Salvo cannot guarantee that other classroom participants will not disclose my participation in the study.

Information taken from my responses will be stored in a secured area with access restricted to the researchers. After 1 year, all materials will be destroyed by the researchers. Aggregate results—data compiled from test responses—will be shared with the class and included as part of pilot testing results that will be shared with Writing Lab administration and staff in order to design better usability testing instruments. No information from this study will be published.

Voluntary Nature of Participation

I do not have to participate in this research project. If I agree to participate I can withdraw my participation at any time without penalty.

Participant's Initials _____

Date _____

Research Project Number SL5 PILOT

Human Subject Statement:

If I have any questions about this research project, I can contact Michael Salvo at 494-4425 or [salvo@purdue.edu](mailto:msalvo@purdue.edu). If I have concerns about the treatment of research participants, I can contact the Committee on the Use of Human Research Subjects at Purdue University, 610 Purdue Mall, Howde Hall Room 307, West Lafayette, IN 47907-2040. The phone number for the Committee's secretary is (765) 494-5942. The email address is irb@purdue.edu.

I HAVE HAD THE OPPORTUNITY TO READ THIS CONSENT FORM, ASK QUESTIONS ABOUT THE RESEARCH PROJECT AND AM PREPARED TO PARTICIPATE IN THIS PROJECT.

Participant's Signature

Date

Participant's Name

Researcher's Signature

Date

Research Exemption Request

Revised 6/03

RESEARCH EXEMPTION REQUEST

Ref # _____

Purdue University
Committee On The Use of Human Research Subjects

1. Project Title: Purdue OWL Usability and Redesign
2. Anticipated Funding Source: Writing Lab departmental account
3. Principal Investigator(s) [See [Policy on Eligibility to serve as a Principal Investigator for Research Involving Human Subjects](#)]:
Tammy Conrad-Salvo, Writing Lab Asst. Dir. English, Heavilon Hall, 494-4102, tcsalvo@purdue.edu

Name and Title Department, Building, Phone, FAX, E-mail address
4. Other Personnel [Such as consultants or graduate students]:
Linda Bergmann, Writing Lab Director English, Heavilon Hall, 496-2814, lbergmann@purdue.edu

Karl Stolley, OWL Technical Coordinator English, Heavilon Hall, stolley@purdue.edu

Christopher Berry, OWL Coordinator English, Heavilon Hall, coordinator@owl.english.purdue.edu
Name and Title Department, Building, Phone, FAX, E-mail address
5. Anticipated Duration of Study: September 30, 2004 September 30, 2005
From To
6. Specific procedures to be followed. Include a copy of questionnaires, interview questions, etc., if applicable.
(Please note that interviews can be taped if the tapes will be erased within two weeks of the interview's completion.)
The Writing Lab will conduct usability tests during the redesign phase of its Online Writing Lab (OWL). Members of the research team will conduct a Card Sort Activity, will record subjects' ease of navigation and feedback about the OWL during an onsite usability test, and will solicit feedback using a survey posted on the new OWL website. Please see [attached descriptions](#) of the usability tests and questions to be used in the survey.
7. Will subject's data be recorded anonymously? YES ☐ NO ☒
8. Type of subjects to be employed and recruitment procedures:
The subjects will be current users of the OWL site: students both at Purdue and elsewhere; faculty and instructors both at Purdue and elsewhere; and independent learners in the Lafayette community and elsewhere. Recruitment consists of posting surveys and requests for participation on the new OWL website and soliciting volunteers through departmental email listservs and the OWL email listserv, to which people around the world have voluntarily subscribed.

I have read the Human Subjects ["Research Exemption Request Guidelines"](#).

Principal Investigator Signature

Date

Institutional Approval by: Exempt _____ Submit Regular Application _____

Date:

Date:

Rebecca D. Armstrong, D.V.M., Ph.D.
Assistant Vice Provost for Research Compliance

Richard D. Manno, Ph.D., Chair
Bruce Craig, Ph.D., Assoc. Chair
Darlene Gelpick, Ph.D., Assoc. Chair
Committee on the Use of Human Research Subjects

Submit the original request to: Human Subjects Office, 610 Purdue Mall, Vice Provost for Research, Heavilon Hall, Room 307,
West Lafayette, IN 47907-2040

Card Sort Activity

Participants will be asked to group keywords and navigational categories in order to help OWL developers categorize materials on the OWL and develop a navigation system with the appropriate categories. For example, participants will be given a stack of cards, with each card containing one of the following possible categories: commas, MLA and APA style, thesis statement, Writing Across the Curriculum, punctuation, resumes, cover letters, focus, organization, and other similar categories of materials. The goal is to see how participants group the categories, so that OWL developers can see beyond the current navigation system of OWL. Research personnel will be looking for consistency in the organization of the categories and using the participants' responses to the card sort to create an online navigational system that best serves users on the new OWL.

Participants will be instructors in the English Department who volunteer to participate in the card sort activity. They will be recruited by a blanket email message sent via English department email [listservs](#).

Onsite Usability Test

Participants will complete a specific activity on the new OWL site, to find one or more resources without the assistance of research personnel or anyone else. These participants will be observed by research personnel, who will record information about how users access the targeted materials and their ease of navigation. After this activity, participants will be asked to give feedback about their use of the site, if they wish.

Participants will be instructors in the English Department and students at Purdue who volunteer to participate in the onsite usability test. They will be recruited by a blanket email message sent via the English department and Purdue University email [listservs](#).

OWL Feedback Survey

Once the information from the Card Sort and the Onsite Usability Test are incorporated into the design and development of the new OWL, research personnel will administer an OWL Feedback Survey. This survey, which solicits users' comments about the site, will be posted as a link on the OWL, and questions will range from whether users like certain features to what suggestions they have for improvement.

Participants will include any user who accesses the OWL site, and they will volunteer to answer the survey. Users will be notified of the survey and will be asked to respond, if they wish, when they visit the OWL. Also, participants will be recruited via an OWL News email message, a weekly email newsletter sent to 1,200 subscribers who sign up for OWL News.

[illegible]

Appendix III

Generation 1 Testing Results

Likert Scale Demographic Results

Question	Mean	Standard Deviation
Q1: I am comfortable operating a computer.	4.722	0.461
Q2: I am comfortable navigating the Internet.	4.722	0.461 ¹
Q3: I often turn to the web to find information.	4.944	0.236
Q4: I frequently use the web for communication (email, instant messaging, chat, blog).	4.722	0.461
Q5: I am comfortable building and maintaining websites.	2.556	1.247
Q6: I spend a lot of time using the computer on a daily basis.	4.50	0.5144
Q7: I consider myself an expert computer user.	3.278	1.179 ²
Q8: I am confident in my writing ability.	3.944	0.872
Q9: I am familiar with concepts in the study of writing.	3.777	0.808 ³
Q10: I often wish there were a resource I could turn to that would answer my writing questions.	3.777	0.943
Q11: I (or someone I know) would benefit from online writing help.	4.111	0.583
Q12: When faced with a writing question, I am likely to consult a book.	2.833	1.098
Q13: When faced with a writing question, I am likely to consult a website.	3.722	0.826
Q14: When faced with a writing question, I am likely to ask another person.	3.833	0.786
Q15: I do not enjoy talking about my writing.	3.167	0.786
Q16: Talking about writing embarrasses me.	2.44	0.705 ⁴
Q17: I prefer to look up information online rather than in a book.	3.667	1.029

¹In our first generation tests, we had a perfect correlation between these two questions. In other words, our participants answered these two questions identically; which suggests that computer proficiency and Internet navigation could be very similar to users.

² Questions 5 and 7 have a .729 correlation. Most of our expert users are also familiar with web design and vice versa.

³ Correlation of 0.815

⁴ About 30% of our variation can be explained through a correlation of these two questions. In other words, 30% of our subjects may link embarrassment and not liking to talk about writing, but not the rest of them. (Correlation of 0.566)

Q18: I prefer to talk to a real person rather than look for answers online.	3.222	1.060
Q19: When I cannot find an answer immediately, I often give up the search.	2.278	0.826

Task 1: Prototype Choices

Because of time constraints, not all participants made a second or third choice. The data here represent the total choices—all 18 participants indicated a first choice while only 16 indicated a second choice.

First Choice

Question	Percentage
Question #1	16.6%
Question #7	22%
Question #10	61%

Second Choice

Question	Percentage
Question #1	18.75%
Question #2	18.75%
Question #8	18.75%
Question #10	37.50%
Question #11	6.25%

Task 1 Results: User Preferences by Prototype⁵

Task 1: Preferences Per Prototype

Categories	Total	Percentage
Likes	170	51.05%
Dislikes	100	30.03%

⁵ The results presented here only reflect anything that at least 10% of our users agreed upon. This was done to bring the results down to a manageable size for the purposes of this report.

Suggestions	63	18.92%
Total	333	100%

Prototype #1: Preferences

Categories	Total	Percentage
Likes	56	68.29%
Dislikes	17	20.73%
Suggestions	7	8.43%
Total	82	100%

Likes

Categories	Total	Percentage
Attractive / Looks	7	12.50%
Design / Layout	7	12.50%
Easy-to-Use/Useful	7	12.50%
Organization of Content	6	10.71%
Professional	12	21.43%

Dislikes

Categories	Total	Percentage
Amount of Text	3	17.65%
Confusing / Unclear	4	23.53%
Text Formatting / Size	2	11.76%
Title	2	11.76%

Suggestions

Categories	Total	Percentage
Add Purdue Branding/Title	2	28.57%
Add Search Bar: Upper Right	1	14.28%
Clarify OWL/WL Categories	1	14.28%
Introductory Info on Left	1	14.28%
Remove Old OWL Info	1	14.28%
Search Only OWL Content	1	14.28%

Prototype #4

Categories	Total	Percentage
Likes	20	21.98%
Dislikes	58	63.74%
Suggestions	13	14.28%
Total	91	100%

Likes

Categories	Total	Percentage
Search Box	3	15.00%
Content: Resources by User	4	20.00%
Content: Most Popular Resources	3	15.00%
Content: Citation Links	3	15.00%
Organization of Content	2	10.00%

Dislikes

Categories	Total	Percentage
Text Formatting/Size	9	15.52%
Unprofessional	11	18.97%

Suggestions

Categories	Total	Percentage
Link to FAQ	2	15.38%

Prototype #7

Categories	Total	Percentage
Likes	47	55.29%
Dislikes	17	20.00%
Suggestions	21	24.71%
Total	85	100%

Likes

Categories	Total	Percentage
Graphics	7	14.58%
Professional	6	12.50%

Dislikes

Categories	Total	Percentage
Confusing/Unclear	5	29.41%
Search Box Location	2	11.76%
Graphics	2	11.76%

Suggestions

Categories	Total	Percentage
Left Navigation	3	14.29%

Prototype #10

Categories	Total	Percentage
Likes	47	62.67%
Dislikes	8	10.67%
Suggestions	20	26.67%
Total	75	100%

Likes

Categories	Total	Percentage
Content: Most Popular Resources	5	10.64%
Easy-to-Use/Useful	6	12.77%
Professional	5	10.64%
Search Box	5	10.64%

Dislikes

Categories	Total	Percentage
Search Box Location	3	37.50%
Search Box: Appearance	4	50.00%
Amount of Text	1	12.50%

Suggestions

Categories	Total	Percentage
Search Bar: Appearance	2	10.00%

Generation One: Paper Prototyping Preferences for Search Bar

Categories	Total
Search Bar: Appearance Should be Different	2
Search Bar: Bottom Center	1
Search Bar: In a Corner	1
Search Bar: Upper Right	2
Search Bar: Top	1
Search Only OWL Content	1
Replace with Google Search Bar	1
Search Bar: Bottom	2
Search Bar: Bottom Left	1
Search on a Different Page	1
Search Bar: Unspecified Location	3
Search Bar: Not in Right Corner	1
#4 Search Bar on #10	1
Localized Search	2

Build Your Own Preferences for Search Bar Location

Participants choose to include the search bar in the following locations:

Categories	Total
Search Bar: Bottom Center	2
Search Bar: Upper Right ⁶	8
Search Bar: Upper Left	1
Search Bar: Bottom Right	3
Search Bar: Bottom Left	1
Search Bar: Top Center	1
Search Bar: Not Included	2

Task 1: Choices by Gender

Male Choice Listings:

First Choice

Questions	Percentage
Question #1	61.54%
Question #7	15.38%
Question #10	61.54%

⁶One of these was located above the title, one was next to the title, and one page did not have a title. All of the rest appeared directly below the title to the right.

Second Choice

Questions	Percentage
Question #1	27.27%
Question #8	9.09%
Question #10	36.36%
Question #11	9.09%
Question #12	9.09%

Total Choices

Questions	Percentage
Question #1	21.88%
Question #2	6.25%
Question #5	3.13%
Question #7	6.25%
Question #8	313%
Question #10	43.75%
Question #11	6.25%
Question #12	9.38%

Female Choice Listings:

First Choice

Questions	Percentage
Question #7	40.00%
Question #10	60.00%

Second Choice

Questions	Percentage
Question #8	40.00%
Question #10	40.00%
Question #12	20.00%

Total Choices

Questions	Percentage
Question #1	0.00%
Question #2	6.67%
Question #3	13.33%
Question #5	6.67%
Question #7	13.33%
Question #8	20.00%
Question #10	33.33%
Question #12	6.67%

Task 1: Choices by Web Expertise

Web Designers

First Choice

Questions	Percentage
Question #1	40.00%
Question #10	60.00%

Total Choices

Questions	wPercentage
Question #1	35.71%
Question #2	7.14%
Question #3	7.14%
Question #5	7.14%
Question #10	35.71%
Question #12	7.14%

Web Dabblers

First Choice

Questions	Percentage
Question #10	100.00%

Total Choices

Questions	Percentage
Question #3	11.11%
Question #10	44.44%
Question #11	22.22%
Question #12	22.22%

Non-Web Designers

First Choice

Questions	Percentage
Question #1	10.00%
Question #7	40.00%
Question #10	50.00%

Total Choices

Questions	Percentage
Question #1	8.33%
Question #2	8.33%
Question #5	4.16%
Question #7	16.67%
Question #8	16.67%
Question #10	41.66%
Question #12	4.16%

Task 1 Based on Previous OWL Usage

OWL Users

First Choice

Questions	Percentage
Question #7	28.57%
Question #10	71.43%

Total Choices

Questions	Percentage
Question #2	6.25%
Question #7	12.50%
Question #8	12.50%
Question #10	50.00%
Question #12	18.75%

OWL Users

First Choice

Questions	Percentage
Question #1	27.27%
Question #7	18.18%
Question #10	54.55%

Total Choices

Questions	Percentage
Question #1	22.58%
Question #2	6.45%
Question #3	6.45%
Question #5	6.45%
Question #7	6.45%
Question #8	6.45%
Question #10	35.48%
Question #11	6.45%
Question #12	3.23%

Task 3 Analysis

General Analysis

We had 18 participants take part in 71 tests, which equaled approximately 4 tasks per participant. All of the tasks were the same but were distributed in a randomized order. The mean clicks per task were 5.56 clicks. The mean clicks per user in four tasks were 23.24 clicks. The mean time per task was 117.76 seconds. The mean time for all four tasks was 452.67 seconds. The range for clicks was 1 to 24. The range in time per task was 25-600 seconds.

First Task Completed

Categories	Clicks	Seconds
Mean	9.18 per participant	195.66 per participant
Range	2-24	45-600

Second Task Completed

Categories	Clicks	Seconds
Mean	5.06 per participant	78.33 per participant

Range	2-29	30-280
-------	------	--------

Third Task Completed

Categories	Clicks	Seconds
Mean	4.47 per participant	65.22 per participant
Range	2-12	25-170

Fourth Task Completed

Categories	Clicks	Seconds
Mean	4.81 per participant	120.12 per participant
Range	1-12	45-240

Task III Part III

Demographic

Questions	Mean	Mode	Range
1. Overall, finding specific information was:	3.6	4	1-5
2. Organization of the home page was:	3.8	4	1-5
3. Most of the information was:	3.61	4	2-5
4. The site organization was:	4	4	3-5
5. The site navigation was:	4	5	1-5
6. When I was looking for information, I felt:	3.44	4	1-5
7. How did you feel when using the site:	3.69	4	2-5

Gender-Based Findings

Female Findings

Questions	Mean	Mode	Range
1. Overall, finding specific information was: ⁷	4.2	4	4-5
2. Organization of the home page was:	4	4	3-5
3. Most of the information was: ⁸	4.2	4	4-5
4. The site organization was:	4.2	4	4-5
5. The site navigation was:	4.2	4 and 5	3-5
6. When I was looking for information, I felt:	3	2 and 4	2-4
7. How did you feel when using the site:	3.6	4	3-4

Male Findings

Questions	Mean	Mode	Range
1. Overall, finding specific information was: ⁹	3.46	4	1-5
2. Organization of the home page was:	3.85	4	1-5
3. Most of the information was: ¹⁰	3.38	4	2-5
4. The site organization was:	3.92	4	3-5
5. The site navigation was:	3.92	5	1-5
6. When I was looking for information, I felt:	3.62	4	1-5
7. How did you feel when using the site:	3.73	4	2-5

⁷ Approaching significance

⁸ Significant at the p<0.05 level

⁹ Approaching significance

¹⁰ Significant at the p<0.05 level

Previous OWL Usage Findings

Questions	OWL Mean	Non Mean	OWL Mode	Non Mode	OWL Range	Non Range
1. Overall, finding specific information was: ¹¹	4.091	3	4	4	2-5	1-4
2. Organization of the home page was: ¹²	4.364	3.143	4	4	3-5	1-4
3. Most of the information was: ¹³	4	3	4	2	3-5	2-5
4. The site organization was: ¹⁴	4.273	3.571	4	4	3-5	3-4
5. The site navigation was: ¹⁵	4.455	3.286	5	4	4-5	1-5
6. When I was looking for information, I felt:	3.727	3	4	4	2-5	1-5
7. How did you feel when using the site: ¹⁶	4.136	3	4	3	3.5-5	2-4

¹¹ Approaching significance

¹² Significant at the $p < 0.05$ level

¹³ Approaching significance

¹⁴ Significant at the $p < 0.05$ level

¹⁵ Approaching significance

¹⁶ Significant at the $p < 0.001$ level

G2 Gender Results

Results based on mouse clicks and gender.

G2 Gender-Based Task Mouse Clicks

	Males	Females
Task 1 clicks	7.88	12.62
Task 2 clicks	6	3.46
Task 3 clicks	4.18	3.77
Task 4 clicks	4.89	5.07

G2 Gender-Based Task Times

	Males	Females
Task 1 time	178	218
Task 2 time	83	75
Task 3 time	67	61
Task 4 time	120	118

Example Data Set: G1 OWL Usability Test

Monday, February 27, 2006

Demographic took 4 minutes.

Test 1

- Subject asked if they would be asked about each prototype.
- The text is very small, would have trouble finding at first sight.
- No search box.
- Likes the large heading on left hand side.
- The background of the right text box does not help the text to appear very clear.
- Hates second design.
- Links to section of the site are very small and looks less important than what's at the bottom of the page.
- Design is not consistent with other Purdue websites.
- In contrast to first, it does have a text search box, but takes a while to notice, it doesn't stand out.
- The title is clear, clearer than OWL Family of Sites.
- Layout is less professional than first design.
- Lower left corner—Design is far better than other two.
- It leaves less wasted space on page.
- Search box is easy to find.
- Purdue Writing Lab Sites is still good title.
- Major sections are clearer and the graphics are more “interesting than other two designs.”
- Likes the curved border on the area, but lots of white space seems wasted.
- Likes larger size of resource box in third design but not in last one.
- Thinks 3rd design is best use of space, likes larger font and graphics.
- Really likes border, but would rather have content of 3rd.

Selected #7 as choice (which was 3rd in sequence, as referenced above).

- The search box is now at bottom right hand, but it's not very intuitive for where one would look for a search box.
- Seems to be a lot of wasted space, but doesn't know if that's reserved for other links.
- Doesn't like this one as much as the previous choice.
- The search box is at top right corner, which is the second most obvious place subject would look.
- Like graphics (icons).
- Large text link boxes with dark borders makes them easier to find.
- Would move search box to top left corner.
- Likes the idea of family in the title, but other title tells more about what someone's looking at.
- However, in combination with the graphics, it shows it's about Purdue's Writing Lab.

Comment on the citation links, unless they have more information, it's not helpful. Subject does not use MLA or APA and would prefer a link to Linguistic Society of America style sheets instead (pink box).

Test 2

- Chose bordered page, but replaces title with “Purdue's OWL Family of Sites.”
- Places search at top left corner, right below title. States that it's where it's expected because most sites have it there—“programmed to look there, stereotypical.”

- Making a pile of rejected elements.
- Looking at readability and would rather have a vertical stack of icons on top of one another but prefers larger size (not very largest size, group that is connected horizontally, but subject would separate and make it vertical).
- Subject rearranges elements several times, but keeps title and search bar in same location, even if other elements were moved.
- Icons are first placed on left side, under search, with the idea they would be separated and stacked. However, after Michael asks him for clarification, he moves things around again.
- Thought everything was too vertical and “stilted.”
- Changes order to place icons horizontally at center of page. Resources are placed under search. News under icons, with FAQs above icons, on right side, mirroring search placement.
- Michael asks subject to arrange elements back to first set up the subject had and snaps a picture of that one, as well.

III. Current Owl Site testing

Opened up IE

7:15.15

How do internet sources diff from print

Went to the Writing Lab website first to find answer, scrolled through, then used navigation bar on the right, scrolled through each topic in navigation bar

1st min... 7 clicks

2nd min... 6 clicks

3rd min... finally clicked owl website... 7 clicks

Found it at 7:18.05

Dealing with writing stress

7:19.35

1 min... 3 clicks

Found the 4 remedies within a minute

3 page resume

7:20.30

1 min.. 6 clicks

7:20.10

Paper for social science

7:21.40

Clicked owl website first

Distracted by other testing going on

10 clicks at 7:22.55

12 clicks total, interrupted by Michael once he found the information.

7:22.31

Began filling out final questionnaire at 7:23

Finished at 7:27.30

Appendix IV

Excerpt from Preliminary Usability Report

Conclusions

Based on data collected from the pilot usability test and the full usability test, we conclude that the redesigned OWL improves on many elements of the original OWL. However, we also conclude that the new OWL does not incorporate many features participants want and expect. In addition, we conclude that the new OWL is not as usable as it needs to be. Lastly, we conclude that the new OWL does not help participants as much as it should, thereby leaving participants with neutral impressions of their experience with the OWL.

Recommendations

In order to best fulfill the redesign goals outlined by the Writing Lab staff, and in order to align closely with Purdue's commitment to the land grant, state university mission, we recommend a user-centered reconfiguration of the OWL Family of Sites homepage. We also recommend a user-based reconfiguration of the OWL homepage and links, a user-based OWL page design, left-justified navigation bars, and a search function. We also recommend a second generation of usability testing to measure the results of the reconfiguration. The following section details the background of the Purdue OWL and the pilot usability test.

Appendix V

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